

CLAIMS

What is claimed is:

1. A method for establishing links between Fibre Channel (FC) node devices through a FC fabric, the method comprising:

assigning a common name to a pair of ports, wherein each port in the pair is located on first and second FC node devices, respectively;

storing the common name-to-port assignment within a name server for the FC fabric;

configuring each port in the pair of ports to query the name server to establish an identity for the other port in the pair of ports based on the common name; and

configuring the first and second node devices to create a link between the pairs of ports that have been assigned a common name.

2. The method of claim 1, wherein assigning the common name comprises automatically deriving the common name based on attributes of each port.

3. The method of claim 2, wherein automatically deriving the common name comprises detecting a port type, a slot number, and a sub-slot number for each port.

4. The method of claim 3, further comprising storing the common name within at least a portion of a symbolic name as defined in the FC protocol, for each port.

5. The method of claim 4, wherein storing the common name-to-port assignment within the name server comprises configuring each port to register the symbolic name with the name server.

6. A method for creating links between Fibre Channel (FC) node devices through a FC fabric, the method, comprising:

assigning a common symbolic name to a pair of FC ports, wherein each port in the pair is located on a separate FC node device;

configuring each port in the pair to register the common symbolic name assigned to the port with a name server for the fabric;

configuring each port in the pair to query the name server to identify the other port in the pair based on the common symbolic name; and

configuring each port in the pair to login to the other port that has the common symbolic name.

7. The method of claim 6, wherein assigning the common symbolic name comprises constructing the common symbolic name based on attributes of the pair of FC ports.

8. The method of claim 7, wherein the attributes are selected from the group consisting of a port type, a slot number for the port, and a sub-slot number for the port.

9. The method of claim 8, wherein the attributes are automatically detected by an operating system for the FC nodes devices.

10. The method of claim 9, wherein assigning the symbolic name comprises storing each of the attributes at a predefined location within a symbolic name field for each port.

11. A computer readable medium, having stored thereon a sequence of instructions which when executed by a processor, cause the processor to perform a method for establishing a link between a first Fibre Channel (FC) port and a second FC port through a FC fabric, the method comprising:

assigning a name to the first port;

storing the name-to-port assignment within a name server for the FC fabric;

configuring the first port to query the name server to establish an identity for the second port based on a match of the name of the first port and a name of the second port name; and

configuring the first port create a link with the second port.

12. The computer readable medium of claim 11, wherein assigning the name to the first port comprises automatically deriving the name based on attributes of the port.

13. The computer readable medium of claim 12, wherein automatically deriving the name comprises detecting a port-type, a slot number, and a sub-slot number for the port.

14. A computer readable medium having stored thereon a sequence of instructions which when executed by a processor, cause the processor to perform a method for creating links between a first Fibre Channel (FC) port and a second FC port through a FC fabric, the method, comprising:

automatically detecting a port type and a PCI address for the first port;

deriving a symbolic name for the first port based on the port type and the PCI address;

storing the symbolic name within a symbolic name field of the first port;

registering the port type and the symbolic name with a name server for the fabric;

querying the name server to obtain the symbolic names of all ports on the fabric that support an upper-level protocol (ULP) supported by the first port;

comparing the symbolic names received from the name server with a symbolic name assigned to the first port; and

performing a port login using the port ID of the port whose symbolic name matches the symbolic name assigned to the first port.

15. The computer readable medium of claim 14, wherein the upper-level protocol is the FCVI protocol.

16. A storage device, comprising:

a processor;

a memory coupled to the processor, the memory storing instructions which when executed by the processor cause the processor to perform a method comprising:

assigning a name to a first port of the storage device;

storing the name-to-port assignment within a name server, for an FC fabric to which the first port is connected;

causing the first port to query the name server to establish an identity for a second port connected to the FC fabric, based on a match of the name of the first port and a name of the second port; and

configuring the first port to create a link with the second port.

17. The computer readable medium of claim 16, wherein assigning the name to the first port comprises automatically deriving the name based on attributes of the port.

18. A method for creating links between a first Fibre Channel (FC) node device and a second FC node device through a FC fabric, the method comprising:

automatically detecting a port type and a PCI address for a first port located on the first node device;

deriving a symbolic name for the first port based on the port type and the PCI address;

storing the symbolic name within a symbolic name field for the first port;

registering the port type and the symbolic name within a name server for the FC fabric;

querying the name server to obtain the symbolic name of all ports on the fabric that support an upper-level protocol (ULP) supported by the first port;

comparing the symbolic names received from the name server with the symbolic name assigned to the first port; and

performing a port login using the port identifier of the port whose symbolic name matches the symbolic name assigned to the first port.

19. The storage device of claim 18, wherein the ULP comprises the FCVI protocol.
20. A computer readable medium having stored thereon a sequence of instructions which when executed by a processor, cause the processor to perform a method for establishing a link between a first Fibre Channel (FC) node device and a second FC node device, through a FC fabric, the method comprising:

automatically detecting a port type and a PCI address for a first port located on the first FC node device;

deriving a symbolic name for the first port based on the port type and the PCI address;

storing the symbolic name within a symbolic name field of the first port;

registering the port name and the symbolic name within a name server for the fabric;

querying the name server to obtain the symbolic names of all ports on the fabric that support an upper-level protocol (ULP) supported by the first port;

comparing the symbolic names received from the name server with a symbolic name assigned to the first port; and

performing a port login using the port identifier of the port whose symbolic name matches the symbolic name assigned to the first port.

21. The computer readable medium of claim 20, wherein the ULP comprises the FCVI protocol.